



Buzzwords ...

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WALLING 21

..... the newsletter for National Beekeepers' Association members

In this issue ...

- * Mites in North America
- * Organic comb honey
- * New feature : NBA diary
- * New use for honey

Buzzwords No 9 June 1989



*'I disavow all knowledge,
consciousness, ken or
cognizance of the lost
thesaurus.'*

A MANAGER FOR THE NBA?

Your executive made an important decision recently to improve its effectiveness. The ever-increasing workload on the executive, and especially on the president, has meant that action had to be taken to cope with the new demands.

In recent years the NBA has been called on to respond to many issues that either haven't been around before, or else have been dealt with by government agencies such as MAF.

The NBA has also been initiating a lot more activities such as beekeeper education, research, marketing and public relations. These have stretched the capacity of executive members under the present voluntary system.

As NBA president Allen McCaw states: "We can no longer afford to let many enquiries or requests for information go

unanswered until someone can afford the time from their own business to respond. With changes in government policies and a greater demand for us to manage our own affairs, we must now face the reality that there is a need for a greater degree of "professional" input to achieve this."

The proposal being considered is for the appointment of a suitably-qualified person, with skills in management and communication, and with a sound knowledge of the beekeeping industry. "It is probable that we would look for someone who is already employed in another related activity, and who has extra time available to put to the service of the beekeeping industry", Allen said.

"We believe that such an appointment would increase the effectiveness of the NBA, by helping to ensure continuation of the good progress made over recent years in important

aspects of our industry, such as public relations, research and government lobbying," he said.

"As an example, we have at the moment no fewer than four pieces of legislation being reviewed which in some way affect our future as an industry. Each one of these could involve submissions and perhaps select committee appearances, which involves more time than can be expected from executive members or the executive secretary under our current set-up."

"It would be the responsibility of a manager to ensure that the appropriate response is made in these cases, and to keep executive informed of further developments as they occur", explained Mr McCaw. "Executive would continue to establish policy as at present according to industry needs and opinion, and the manager would be in a support role assisting the executive in administering the association."

On the question of cost, Mr McCaw indicated that it should be possible to establish a half-time position within the current funding structure of the NBA. Areas of cost saving elsewhere in the budget were currently being considered, and a possible future reduction in the number of executive members has been suggested.



"We are very aware of the present difficulties being faced by beekeepers at the moment, and of the increase in the hive levy this year. The question of further funding requirements for disease inspection services is still hanging over us as well, and we cannot ignore any of these factors", he stated.

The NBA president also stated that it was rather ironical that the need to respond to the user-pays policies of the government was one of the main reasons for the association now investigating employing a manager. This was because of the increased administration which would result from the NBA levying all 7,000 or more beekeepers in New Zealand, instead of the present 1,200 or so association members.

It is intended to circulate a proposal to NBA branches before July's conference, and to seek the support of the industry through an executive remit there. "I strongly believe that

we can no longer afford to rely entirely on the voluntary efforts of a few willing people for the administration of the beekeeping industry. We must become more professional in everything we do", concluded Mr McCaw. "I sincerely hope that this proposal will be supported by everyone in the industry."

CONFERENCE IS COMING

Don't forget to book your conference accommodation with the Pacific Park Motor Hotel in Dunedin, for 24-27 July 1989.

Programme outline

- Monday 24 July: Specialty group meetings in the afternoon, with an informal get-together in the evening.
- Tuesday 25th: NBA Seminar - "Towards the 1990's" (Diversification, the weather, computer use in beekeeping).
- Wednesday 26th: Conference begins - social in the evening.
- Thursday 27th: Conference and AGM

Full details have been published in the latest issue of the *New Zealand Beekeeper*.

The Otago branch will arrange transport from Dunedin airport to the hotel, provided you let the secretary know in advance.

- Otago branch

NBA DIARY

This column will be a regular feature of *Buzzwords*. It's your noticeboard for branch news and events, so use it to encourage beekeepers in your area to participate in local activities. It can save on postage too!

In this spot you'll also see deadlines which have to be met as part of the NBA's rules and regulations.

June deadlines

- 1 June: Penalty of 10% for non-payment of hive levy applies.
- 10 June: Last day for remits to conference to be in the hands of the executive secretary for inclusion in the remit paper.
- 30 June: Final day for return of voting papers for executive.

Late reminder - According to the NBA's rules all branches are supposed to hold their annual general meetings during April (Rule 26a). So if your branch hasn't had their AGM - get onto it now! And don't forget to send a copy of your audited annual accounts to the executive secretary, to ensure you get your capitation grant.

Auckland branch have mapped out their programme for the next few months. (All meetings are at 7.30pm in St Hilda's Hall in Ellerslie, except for the field day).

- | | |
|-----------|---|
| 10 June | Field day and farewell to Denis Anderson, DSIR, Mt Albert Road. Starts at 10am. |
| 6 July | Remit discussion, election of delegates, general business. |
| 24 August | Conference report, general business |
| 5 October | General business |

- NBA executive and Auckland branch

ORGANIC COMB HONEY

Organic comb honey is the latest, and some exporters are trying to develop a market for pesticide-free product.

If exporters wish to export unfumigated comb honey they are welcome to do so but Murray Reid, MAF's Apiculture Manager, says that this fact must be recorded. "MAF will endorse the export certificate to the effect that the comb honey has not been fumigated", he said.

"MAF can also accept ethylene oxide (Fumigas 10) fumigation", Murray said. "The dose rate with the standard nozzle which delivers 180g per minute is one minute for every cubic metre of space to be fumigated."

The other alternative is freezing comb honey to -18°C for 12 hours. "No endorsement on the certificate is needed where freezing has been used, but exporters should be aware that the honey may shrink or crack during freezing and that labels can be affected", Murray advised.

Remember that whether comb honey is frozen or fumigated, special care should be taken to prevent wax moths infesting the product after treatment.

- MAF apiculture unit

FOOD PROCESSING NEWS

Honey packers and processors could benefit from a new service being offered by Otago University. Two new units have been set up to help processors and marketers of foodstuffs. The Food Marketing Research Unit and the Food Product Development Unit both carry out custom research for clients. They can call on expertise from both the University of Otago and the DSIR.

For further information write to Otago University, PO Box 56, Dunedin or fax (024) 776 672.

WAX MOTH CONTROL

Garlic seems to be making a comeback as a natural medicine and pest control agent. One Irish beekeeper reported that she placed garlic in a hive and next day found all the wax moth larvae dead on the floorboard.

The Romans had a more appealing but probably no more effective method of moth control. According to *National Geographic* magazine they got bare-breasted virgins to beat surrounding bushes to drive out the moth whose larvae devastated their woollens.

THE LAW AND YOU

It's amazing how often beekeepers tell me they "didn't know" about their responsibilities under the Apiaries Act. You know the old saying about ignorance of the law being no excuse, and any stockist of government books can order you a copy of the Apiaries Act 1969.

But to make it easier for you, here's a digest of some of the more important duties of beekeepers.

If you stop to think about it you'll realise that the Apiaries Act, while doubtless an act of parliament, is really the beekeeping industry's own best means of disease protection rather than a punitive law to be administered by bureaucrats. It's actually just a formalized set of beekeeper and government behaviours which, if followed, would result in effective disease control.

When you look at it this way it's obviously in everyone's best interest to play by the rules. And yet to a greater or lesser extent many beekeepers, well meaning and otherwise, sometimes fail to carry out all the prescribed activities called for under the act. For most people such laxness doesn't appear to be serious; but the result, particularly in the case of a major disease outbreak, could be disastrous for the industry as a whole.

So with another season just around the corner and in the interests of all beekeepers, large and small, here's a "Back to Basics" primer on your duties under the Apiaries Act 1969:



* **Apiaries to be registered** (Section 4). Anyone who keeps bees in any location for more than 14 days is required to register that location (permanent or seasonal) with the apiary registrar, MAF. This means that waiting until inspection return time is not following the rules. Application forms for registration are available from any office of MAF, or you can simply write or phone in.

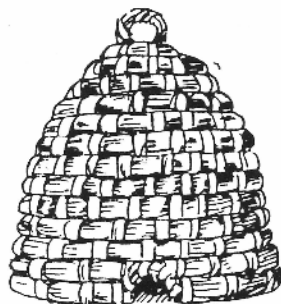
Pollination sites should be listed separately and advised to MAF before the hives go in.

* **Registrar of apiaries** (Section 4(6)). All registrations of apiaries are kept in an apiary register for the district. While in the past this register was updated manually, now computerized registers have improved speed, accuracy and disease control. It should be remembered that all apiary registers contain privileged information and no-one is entitled to search the register without permission of the Director-General of MAF.

* **Identification of apiaries** (Section 5). All beekeepers are issued with a code number the first time they register an apiary. To aid in apiary identification each apiary registered by the beekeeper is required to have that code number clearly marked, either on one or more hives or on a marker post or sign.

This is probably the single most disregarded section of the act, and yet it is one of the most important requirements relating to apiary identification and disease control.

* **Information to be supplied to registrar** (Section 6). If you sell or cease to occupy a permanent apiary, or buy an apiary already registered by someone else, you are required to notify MAF of the change within 14 days.



* **Abandoned or neglected bees and beehives** (Section 10). If warranted inspectors find abandoned beehives or apiaries (it happens more often than you might think!), in the case of a registered apiary they may direct the beekeeper to dispose of the hives within a specified time. If the beekeeper fails to comply the hives will be destroyed by MAF (and a bill sent). In the case of an unregistered apiary the hives can be destroyed forthwith.

* **Outbreak of AFB** (Section 18). This is the section which outlines the annual statement of hive inspection system. Note that the return should be sent back as soon as the spring inspection is completed. (The date of 7 December is the latest possible).

* **Notification of AFB** (Section 18(1)). Beekeepers finding AFB at any time during the season must immediately send written notice to MAF as well as eradicating the disease. If you wait until you send in your inspection return you are not complying with the act!!!

* **Dealing in diseased bees** (Section 20). Hives from apiaries where disease has been found cannot be sold or given away

within 28 days of disease discovery, without written consent of the inspector. The inspector can also quarantine hives on site for a period of up to three months.

It's a good idea to be familiar with the provisions of the Apiaries Act. Copies of the Apiaries Act 1969 can be obtained from any office of the Government Printer. The act was recently reprinted with amendments incorporated, so you don't have to keep referring to other bits of paper. Remember - It's your act. Use it!

- MAF Tauranga

A MATTER OF DEGREE

How much cold is required to kill wax moths? Some beekeepers are interested in treating wax moth by freezing them to death, so they need to know the answer to that question. As far as I know, the only people who have tried to answer it were from the US Department of Agriculture in the late 1960s.

The different stages of wax moth (egg, larva, pupa, adult) have different resistances to cold temperatures. Usually, but not always, eggs are the most difficult to kill. The time taken to achieve 100% kill of all stages depends on the temperature used.

Temperature	-1°C	-7°C	-12°C	-15°C	-18°C
Time taken to kill 100% of all wax moth stages	8 hr +	4.5 hr	3 hr	2 hr	2 hr

Remember that these experiments were done in laboratory conditions; you can't expect to put a moth-ridden super into a freezer at -12°C and pull it out three hours later with all moths killed. It takes time for the combs to cool down to the freezer temperature, and generally 12-24 hour freezer time is recommended to allow plenty of margin for error.

As with fumigation, extreme care must be taken to prevent reinfestation after treatment and before comb honey is packed.

- MAF Tauranga

A NEW LOOK TO AGRICULTURAL SECURITY

MAF has merged its different quarantine services into one National Agriculture Security Service (NASS).

From the public's point of view the new service will not seem very different. However, from inside MAF, the individual services of off-shore quarantine, border protection, post-entry quarantine, disease protection, disease and pest surveillance and emergency response procedures for plants and animals will all come under NASS.

NASS is based on an Agriculture Security Policy which is being negotiated with all those groups affected by quarantine regulations, including government departments.

NEW USE FOR HONEY

In the U.S.A. Cornell University food scientists have found a natural alternative to sulphites for keeping white wines and fruit juices from turning brown honey.

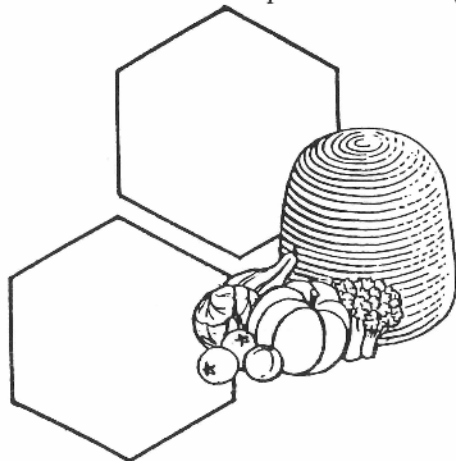
The browning reaction has always been a problem with fresh fruits and juices. Not only does the reaction change the colour of fruit and juice, but it has an adverse effect on nutrition - including vitamin C - and flavour.

Research in the 1930s and 1940s led to the use of sulphites, from sulphur dioxide, for preserving dried fruit and preventing the browning reaction. Today, sulphites are routinely used in juice processing as well as winemaking, where they prevent further fermentation and oxidation. But sulphites can cause allergic reactions in some people, which is one reason why the US Food and Drug Administration has limited their use in salad bars.

An alternative to sulphites would be a boon to the food-processing industry, which makes everything from apple sauce to the increasingly popular white grape juice. The U.S. studies focused on the phenolic compounds, which are naturally occurring, complex substances in fruit.

Whenever you bruise or cut or grind the cell structure of fruit - whenever you bite into an apple - enzymes and phenolic compounds come together with oxygen in the air to produce even more complicated compounds and the browning reaction.

The search for natural additives to prevent browning led to honey.



The process is simple, yet patentable, according to the inventors; Between 1 and 10 percent (by weight) of honey is added to juices, which are then agitated and allowed to rest at room temperature for several hours. Once a brown sludge of macromolecules sinks to the bottom of the juice and is filtered out, the juice remains clear indefinitely.

Because the process could add unwanted sweetness to wine, the honey should be added to grape juice before or early in the fermentation process, the food scientists advise. That way, yeast can consume the additional sugar and the residual sugar content of the wine is not affected.

Now the scientists are analyzing proteins in honey to learn exactly what inhibits the browning reaction. Just about any kind of honey - clover, sunflower, buckwheat or blends -

seems to work. By separating and testing fractions of honey protein, they have determined that the important protein originates in the bee, not in the flowers.

Perhaps there's an opening here for this process, given the amount of apple juice and wine made in New Zealand.

- adapted from *The Speedy Bee*

INDUSTRY PROFILE A HIT

Executive are continuing to receive good feedback about its booklet *New Zealand Beekeeping - An Industry Profile*.

One recent example was from our trade commissioner in Tokyo who writes: "We found this booklet interesting because over the years this office has had a number of contacts with the New Zealand apiary industry".

He goes on to provide up to date statistics for import and export of honey for Japan, and a report on the market in that country.

The industry profile has been well received by its target audience: decision makers who deal with our industry.

MITES IN NORTH AMERICA

What's the latest on the monster mites in North America? Here's an update on where they are and what they are doing.

Varroa in the USA

The *Varroa* mite has now been found in 19 states of the USA: Florida, Illinois, Indiana, Maine, Michigan, Mississippi, Nebraska, New York, Rhode Island, Ohio, Pennsylvania, South Carolina, South Dakota, North Dakota, Washington, Wisconsin, California, Georgia and Massachusetts.

Some states have attempted to eliminate the infestations, whereas others are placing colonies under quarantine and treating with Apistan strips.

Varroa in Canada

In 1988 in Canada 2% of hives were sampled using sticky boards and fluvalinate strips. This rate of sampling is calculated to give a 99% chance of finding *Varroa* mites if they are present in 0.1% of hives. No *Varroa* mites were found.

Effects of *Varroa*

Varroa lives externally on the adult bee and is large enough to be seen without magnification. It pierces the membrane between body segments and sucks the bee's body fluids. The debilitating effects of this shorten the adult bee's life considerably.

Adults produce offspring by entering a brood cell just before it is capped. While the brood is developing the adult female lays several eggs. The nymphs produced partially consume the developing brood, sometimes causing its death but more

often producing deformed adult bees. When the bee emerges the young mites emerge also, ready to attach onto adult bees. *Varroa* will kill a hive in about four years. Of the two mites we are concerned with this is by far the most serious.

Tracheal mite in the USA

The tracheal mite was first discovered in Mexico early in the 1980s. In 1984 the first find in the US was in Texas and now tracheal mites can be found in most continental US states.

Tracheal mite in Canada

In eastern Canada tracheal mite was found in Quebec in 1988 near the US border. It was discovered in Ontario 2-3 years ago and apparently eradicated, as sampling has not turned up any new finds since. Manitoba and Saskatchewan found mites in 1987 and 1988.

In the prairie provinces, Manitoba sampled 1253 apiaries belonging to 60 beekeepers in 1988. Positive finds were detected in apiaries belonging to two beekeepers. In Saskatchewan mites were found in apiaries belonging to five more beekeepers in 1988. Alberta has collected 2000 samples and examined 800. To date there have been no positive finds in Alberta.



In British Columbia, mites were found in one apiary moved from Vancouver Island last June. The bees in the colonies were destroyed. In subsequent tracebacks nine apiaries belonging to one beekeeper in the Peace River district were found positive for tracheal mite and the bees in these hives killed. There have been several additional finds in the Peace very recently.

Effects of tracheal mites

Reports from Europe have suggested that this mite has little effect on colonies. Now though, there is increasing concern in the US since it is causing more trouble than earlier anticipated. It is one additional factor which creates less than desirable overwintering and spring buildup results.

The tracheal mite (formerly known as the acarine mite) lives in the breathing tubes or tracheae in the first segment of the thorax of adult honey bees. Here it feeds on body fluids and

constricts oxygen flow. Eggs are laid from which nymphs and adults develop. It spreads from bee to bee by moving to the tip of the stiff hairs surrounding the tracheal opening and attaching to similar hairs of an adjacent bee, but is only able to enter young bees.

The spread of this mite from hive to hive in an apiary is by drifting bees, but it does not spread readily from apiary to apiary. Beekeepers are mainly responsible for spread through package bees, nuclei and hive sales.

This species is considered a serious pest in North America, especially when over 30% of bees in a hive are infected. Wintering results are poor and colony buildup is slowed when infestation rates are high. The presence of tracheal mite adds to other stress factors such as pollen shortages, pesticide residues, nosema, chalkbrood and sacbrood. The mite population is reduced during the honey flow but increases in the autumn and remains at a high level until next spring.

Low levels of infestation do not harm colonies appreciably. It may take three years for a low infestation level in a hive to increase to a serious level. In many hives the low level does not increase, suggesting a resistance mechanism.

Although the evidence suggests that the tracheal mite can be lived with, especially with the use of menthol treatment of hives, if acarine were to reach New Zealand a number of markets for queens and packages could be affected.

AND FINALLY ...

* Look in your bookshops for the second issue of the *New Zealand Geographic*. The issue just out features bees and beekeeping as a cover story. It has superb photos and the text puts beekeeping in a good light.

* Telecom has requisitioned Allen McCaw's telephone system for their museum, as an exhibit of how things used to be. Your president reports that he is learning to adjust to using a telephone without a crank handle on the side. can now be reached at (02997) 7198. The former members of his party line have not objected to the change ...

BUZZWORDS IS ...

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